

LISTING OF THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

1. (previously presented) A thermosetting coating composition comprising

at least one monomeric material having a plurality of active hydrogen groups,

at least one crosslinker reactive with the at least one monomeric material,

a crystalline reaction product of an amine and an isocyanate, and

optionally a polymeric or oligomeric material.

2. (previously presented) A thermosetting coating composition according to claim 1, wherein the active hydrogen groups are selected from carbamate groups, terminal urea groups, hydroxyl groups, carboxylic acid groups, and combinations thereof.

3. (previously presented) A thermosetting coating composition according to claim 1, wherein the crosslinker is reactive with the crystalline reaction product.

4. (previously presented) A thermosetting coating composition according to claim 1, wherein the at least one monomeric material having a plurality of active hydrogen groups comprises a carbamate-functional or terminal urea-functional monomeric material comprising at least two functional groups, at least one of which is a

carbamate or terminal urea group that is the reaction product of (1) an hydroxyl group of a first compound that is the result of a ring-opening reaction between a compound with an epoxy group and a compound with an organic acid group and (2) cyanic acid or a carbamate or urea group-containing compound.

5. (previously presented) A thermosetting coating composition according to claim 1, wherein the at least one monomeric material having a plurality of active hydrogen groups comprises a carbamate-functional or terminal urea-functional material that is the reaction product of (1) a compound comprising a carbamate or terminal urea group and an active hydrogen group that is reactive with (2), and (2) a lactone or an hydroxy carboxylic acid.

6. (previously presented) A thermosetting coating composition according to claim 1, wherein the at least one monomeric material having a plurality of active hydrogen groups comprises a carbamate-functional or terminal urea-functional material that is the reaction product of a first material (A) that is prepared by reacting (1) a compound comprising a primary carbamate or terminal urea group and an hydroxyl group and (2) a lactone or a hydroxy carboxylic acid reacted with a second material (B) that is reactive with hydroxyl groups on a plurality of molecules of compound (1), but that is not reactive with the carbamate or urea groups on compound (1).

7. (previously presented) A thermosetting coating composition according to claim 1, wherein the at least one monomeric material having a plurality of active

hydrogen groups comprises a carbamate-functional or terminal urea-functional material that is the reaction product of (1) a first material that is the reaction product of a mixture including at least a polyisocyanate and an active hydrogen-containing chain extension agent with (2) a compound comprising a group that is reactive with said first material and a carbamate or terminal urea group or group that can be converted to a carbamate or terminal urea group.

8. (previously presented) A thermosetting coating composition according to claim 1, wherein the at least one monomeric material having a plurality of active hydrogen groups comprises a carbamate-functional material having at least two carbamate groups and a hydrocarbon moiety with about 24 to about 72 carbon atoms,

9. (previously presented) A thermosetting coating composition according to claim 1, wherein the amine is a primary monoamine.

10. (previously presented) A thermosetting coating composition according to claim 1, wherein the amine is selected from the group consisting of benzylamine, ethylamine, propylamine, butylamine, pentylamine, hexylamine, methylbutylamine, ethylpropylamine, ethylbutylamine, and combinations thereof.

11. (previously presented) A thermosetting coating composition according to claim 1, wherein the isocyanate comprises 1,6-hexamethylene diisocyanate.

12. (previously presented) A thermosetting coating composition according to claim 1, further comprising fumed silica.

13. (previously presented) A method of coating a substrate with a coating composition, having steps of:

applying to the substrate a layer of thermosetting coating composition comprising at least one monomeric material having a plurality of active hydrogen groups, at least one crosslinker reactive with the at least one monomeric material, a crystalline reaction product of a primary monoamine and an isocyanate, and optionally a polymeric or oligomeric material; and

curing the applied layer to produce a cured coating layer on the substrate.

14. (original) A method according to claim 13, wherein the coating composition further comprises fumed silica.

15. (previously presented) A method according to claim 13, wherein the thermosetting coating composition is applied as a clearcoat layer over a previously applied basecoat coating layer.

16. (previously presented) A thermosetting coating composition comprising:

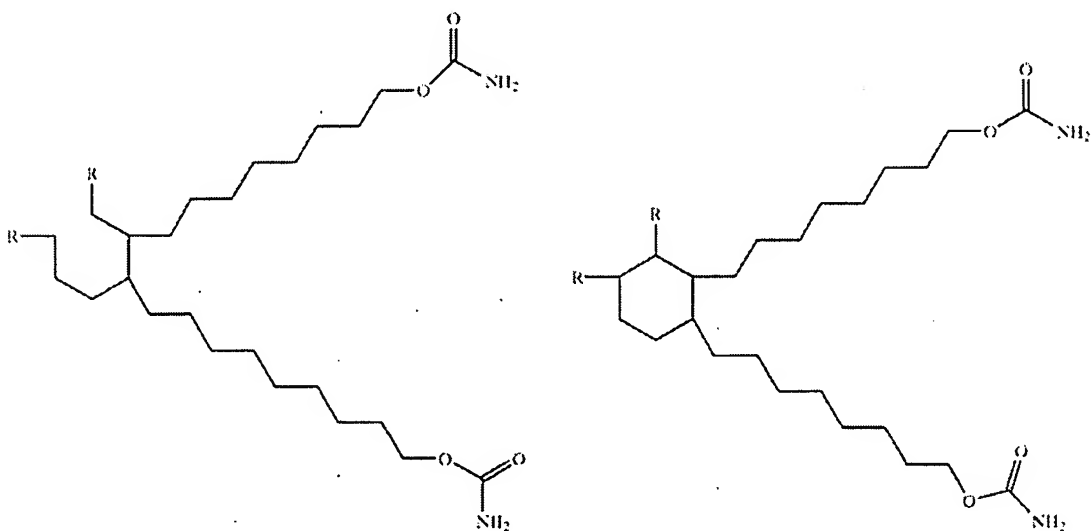
a film-forming component and a crystalline reaction product of an amine and an isocyanate, the film-forming component consisting of:

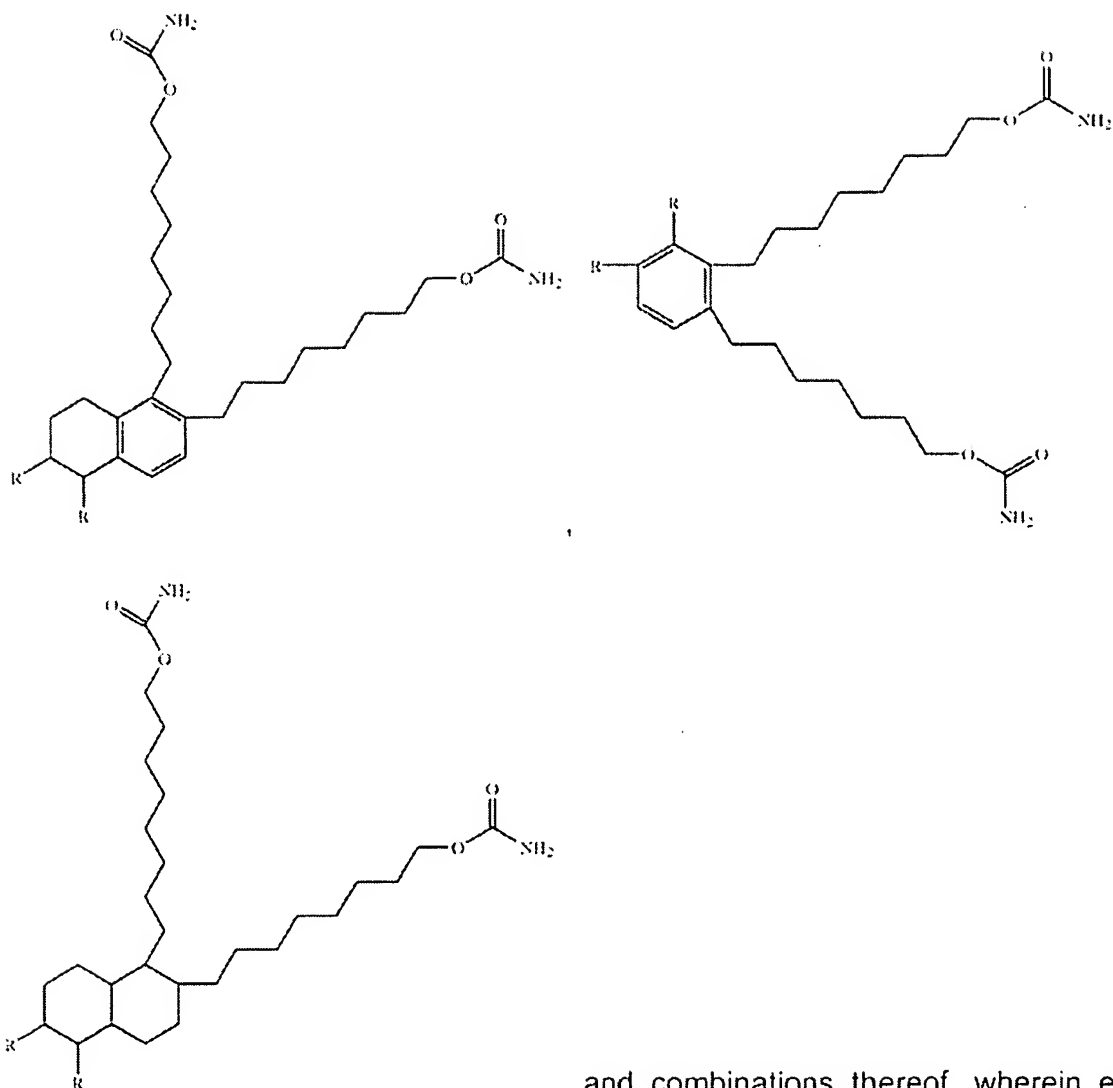
at least one monomeric material having a plurality of active hydrogen groups, and

at least one crosslinker reactive with the at least one monomeric material,

wherein the coating composition is a clearcoat composition.

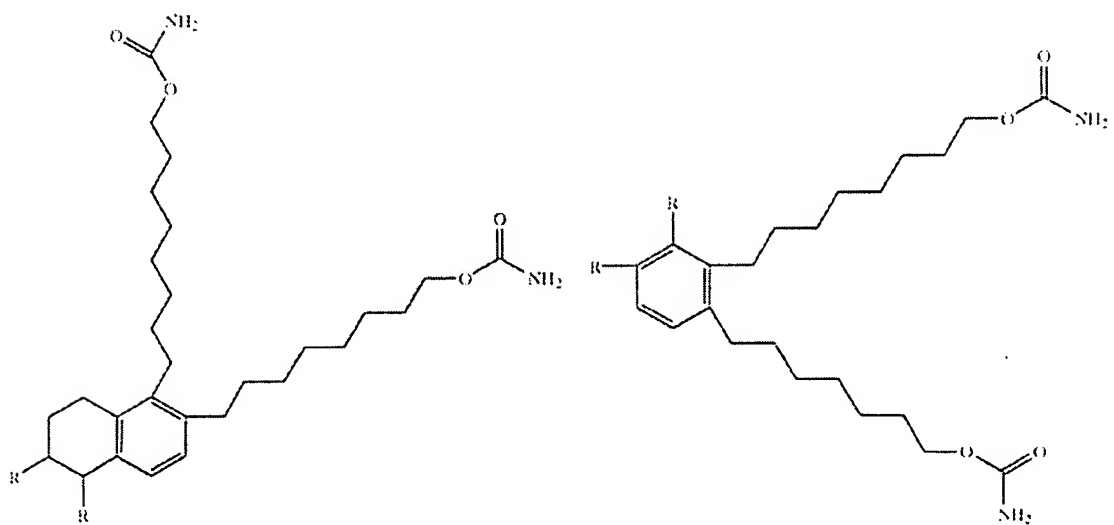
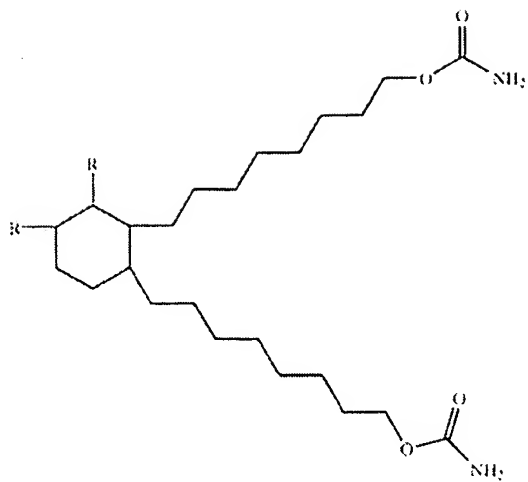
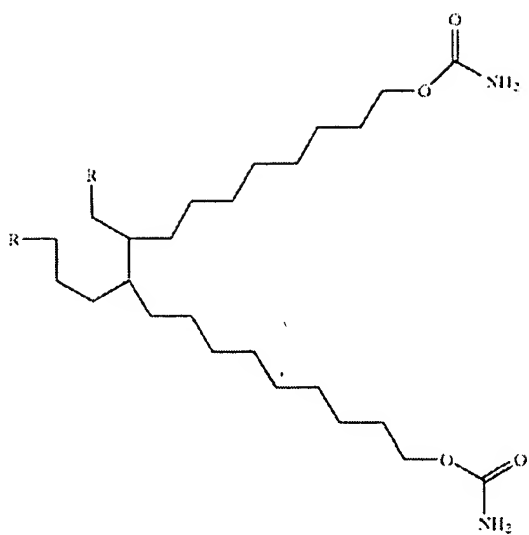
17. (previously presented) A thermosetting coating composition according to claim 1, wherein the at least one monomeric material having a plurality of active hydrogen groups is a member of the group consisting of:

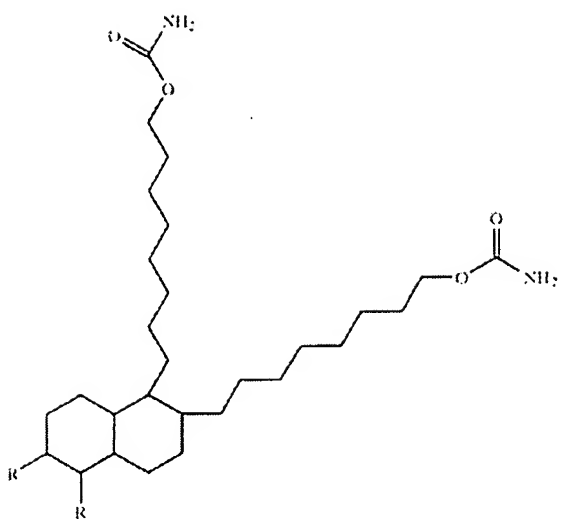




, and combinations thereof, wherein each R group is independently an alkyl of 5 to 8 carbon atoms.

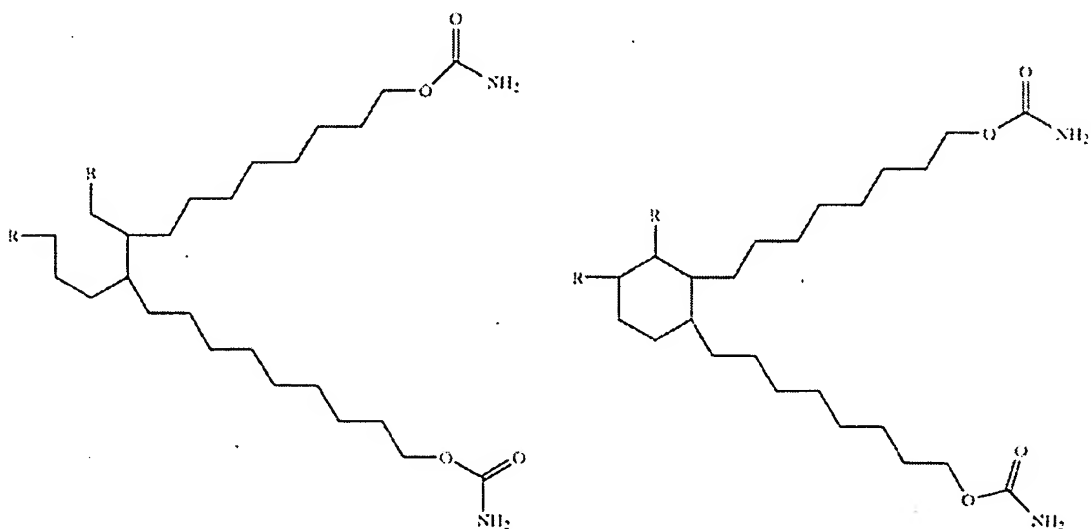
18. (previously presented) A method according to claim 13, wherein the at least one monomeric material having a plurality of active hydrogen groups is a member of the group consisting of:

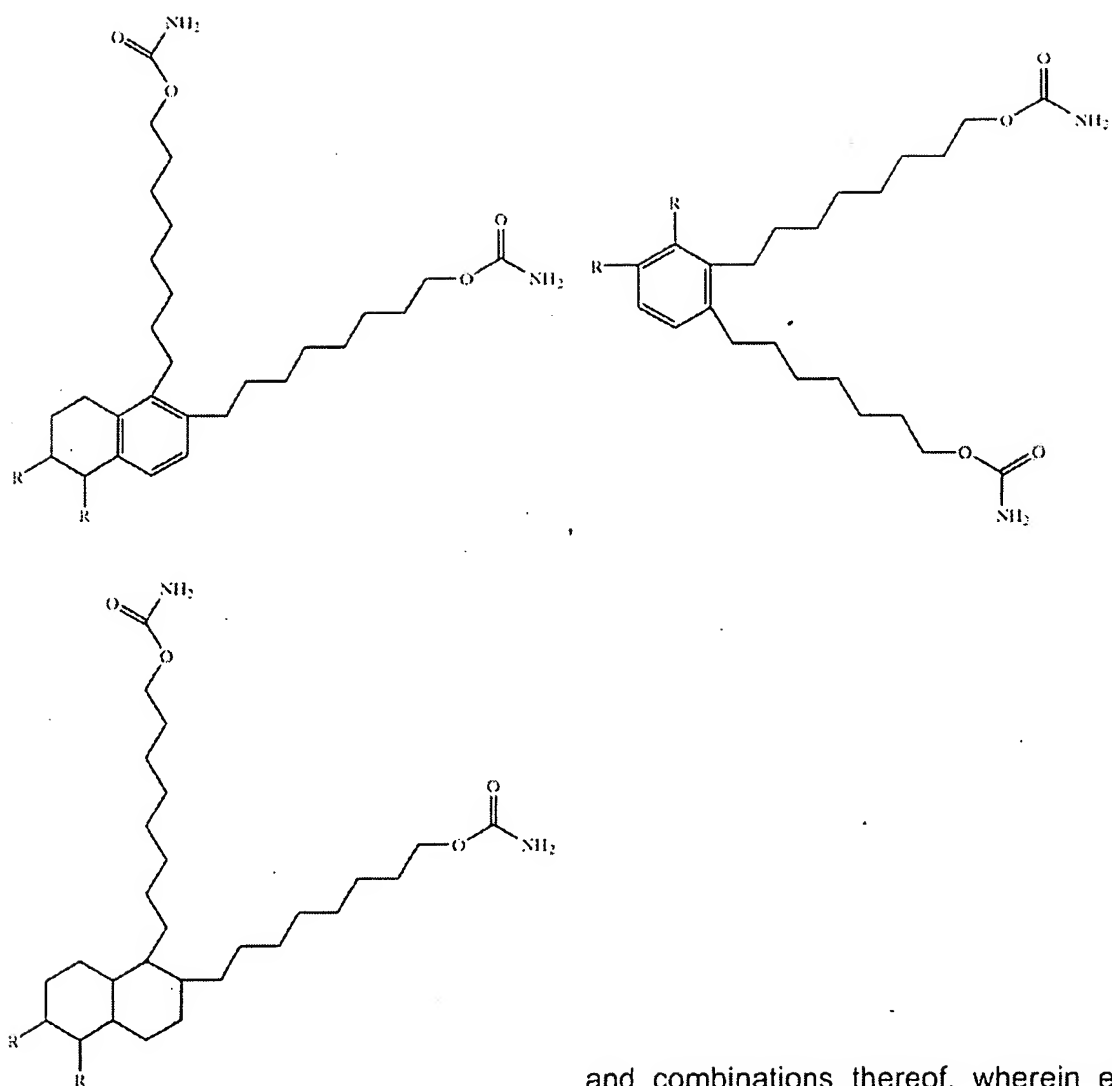




, and combinations thereof, wherein each R group is independently an alkyl of 5 to 8 carbon atoms.

19. (previously presented) A thermosetting coating composition according to claim 16, wherein the at least one monomeric material having a plurality of active hydrogen groups is a member of the group consisting of:





, and combinations thereof, wherein each R group is independently an alkyl of 5 to 8 carbon atoms.